UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/710,339	11/09/2000	Henrik Bisgard-Frantzen	5835.200-US	9183

25908 7590 01/15/2004

NOVOZYMES NORTH AMERICA, INC.
500 FIFTH AVENUE
SUITE 1600
NEW YORK, NY 10110

EXAMINER	
MONSHIPOURI, MARYAM	

ART UNIT	PAPER NUMBER
1652	

DATE MAILED: 01/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Interview Summary	Application No.	Applicant(s)	
	09/710,339	BISGARD-FRANTZEN ET AL.	
	Examiner	Art Unit	
	Maryam Monshipouri	1652	

All participants (applicant, applicant's representative, PTO personnel):

(1) *Maryam Monshipouri*. (3)_____.

(2) *Mr. Jason I. Garbel*. (4)_____.

Date of Interview: *12 December 2003*.

Type: a)☒ Telephonic b)☐ Video Conference
c)☐ Personal [copy given to: 1)☐ applicant 2)☐ applicant's representative]

Exhibit shown or demonstration conducted: d)☐ Yes e)☐ No.
If Yes, brief description: _____.

Claim(s) discussed: *31,50 and 52*.

Identification of prior art discussed: _____.

Agreement with respect to the claims f)☐ was reached. g)☐ was not reached. h)☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: *Examiner requested a declaration comparing the structures of bacterial and fungamyl enzymes as well as a new sequence listing. After viewing the declaration it was mutually agreed to delete the loops that are located in identical locations in both enzyme sources from claim 31 to overcome pending 103 rejection (see the examiner's amendment).*.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Examiner's signature, if required

An **Examiner's Amendment** to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this Examiner's Amendment was given in a telephone interview with Mr. Jason I. Garbell, on 12/12/2003.

Examiner's Amendment to the Claims

Cancel claims 50 and 52.

In claim 31, line 3, delete " Region 98-110".

In claim 31, line 5, delete "Region 161-167".

Examiner's Amendments to the Specification

The following is an **Examiner's Statement of Reasons for Allowance**:

Claims 31-33, 39-43, 48, 51 and 53-62 are directed to variants of a parent Fungamyl-like alpha-amylase of specific amino acid sequence comprising:

(a) alterations in specifically claimed regions, wherein the alterations are independently (i) an insertion of an amino acid downstream of the amino acid occupying the position, (ii) a deletion of the amino acid which occupies the position or (iii) a substitution of the amino acid sequence which occupies the position with a different amino acid,

(b) the variant has alpha-amylase activity, and

(c) each region or position corresponds to a region or a position of the amino acid sequence of the parent Fungamyl-like alpha-amylase has said specifc amino acid sequence and compositions comprising said variants.

Claimed variants are free of prior art. Further, although the prior art teaches generally about how to prepare variants of alpha amylases using bacterial like alpha-amylase (termamayl alpha amylase) crystal structure, said structure does not guide one of ordinary skill in the art in preparing variants comprising alterations at one or more specifically claimed regions of parent fungamyl-like alpha amylases, with properties claimed, rendering the invention also non-obvious.

Since claimed variants are novel and non-obvious, compositions comprising said variants are also novel and non-obvious.

Claims 31-33, 39-43, 48, 51, 53-62 are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Maryam Monshipouri, Ph.D. whose telephone number is (703) 308-1083. The Examiner can normally be reached daily from 8:30 A.M. to 4:30 P.M.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Dr. P. Achutamurthy, can be reached at (703) 308-3804. The OFFICIAL fax number for Technology Center 1600 is (703) 308-4242.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 1600 receptionist whose telephone number is (703) 308-0196.

MARYAM MONSHIPOURI, PH.D.
PRIMARY EXAMINER